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AMENDMENTS TO THE DRAWINGS:

The attached sheets of Drawings include changes to Figs. 6, 7, 8A and 8B. These sheets, which include Figs. 6, 7, 8A and 8B, replace the original sheets including Figs. 6, 7, 8A and 8B.

Attachment: Three (3) Replacement Sheets.

REMARKS/ARGUMENTS

Claims 1-11 are pending in this application. By this Amendment, Applicants AMEND the Drawings.

The Drawings were objected to for failing to designate Figs. 6, 7, 8A and 8B as --Prior Art--. Applicants have amended Figs. 6, 7, 8A and 8B to be properly designated as --Prior Art--. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to the Drawings.

Claims 1-11 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of co-pending U.S. Application No. 10/780,400 (U.S. Patent Application Publication No. US 2004/0183629).

In the accompanying Terminal Disclaimer, Applicants have disclaimed the terminal portion of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 to 156 and 173, as shortened by any terminal disclaimer filed prior to the grant of commonly owned U.S. Applications No. 10/780,400. Accordingly, Applicants respectfully request reconsideration and withdrawal of the provisional rejection of claims 1-11 under the judicially created doctrine of double patenting as being unpatentable over claims of co-pending U.S. Application No. 10/780,400.

Claims 1-10 were rejected under 35 U.S.C. § 102(e) as being anticipated by Mizoguchi et al. (US 2004/0183629). Claim 11 was rejected under 35 U.S.C. § 103(a) as being anticipated by Mizoguchi et al. (US 2004/0183629) in view of Mizoguchi et al. (JP 2002-325002). Claims 1-5 and 7-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mizoguchi et al. (JP 2002-325002 or JP 2002-335111) in view of Chaturvedi (U.S. 5,977,850). Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mizoguchi et al. (JP 2002-325002 or JP 2002-335111) in view of Chaturvedi, and further in view of Kanba (U.S. 2002/0053960).

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In accordance with MPEP § 201.15, Applicants enclose herewith certified English translations of the Japanese Priority Application Nos. JP 2003-061937 and JP 2003-398895, and statements that the translation of the certified English translations are accurate. Thus, Applicants respectfully submit that Mizoguchi et al. (US 2004/0183629) does not qualify as prior art under 35 U.S.C. § 102(e) because the filing date of February 17, 2004 of Mizoguchi et al. (US 2004/0183629) is after the effective filing dates of March 7, 2003 and November 28, 2003 of Japanese Priority Application Nos. JP 2003-061937 and JP 2003-398895, respectively.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-10 under 35 U.S.C. § 102(e) as being anticipated by Mizoguchi et al. (US 2004/0183629), and the rejection of claim 11 under 35 U.S.C. § 103(a) as being anticipated by Mizoguchi et al. (US 2004/0183629) in view of Mizoguchi et al. (JP 2002-325002).

Claim 1 recites:

“A bandpass filter comprising:
a dielectric substrate;
a resonator electrode provided on a portion of a plane at an intermediate height in the thickness direction of the dielectric substrate so as to oppose a top surface of the dielectric substrate and includes an aperture;
first and second ground electrodes arranged over and under the resonator electrode, respectively, in the thickness direction of the dielectric substrate so as to oppose the resonator electrode with dielectric layers disposed therebetween and so as to sandwich the resonator electrode;
input-output coupling electrodes coupled to the resonator electrode;
input-output terminal electrodes provided on the outside surface of the dielectric substrate and being electrically connected to the input-output coupling electrodes; and
a via-hole electrode that penetrates through the aperture in the thickness direction of the dielectric substrate so as not to be electrically connected to the resonator electrode and that is electrically connected to the first and second ground electrodes.”

(emphasis added)

With the unique combination and arrangement of features recited in claim 1, including the features of “a resonator electrode provided on a portion of a plane at an intermediate height in the thickness direction of the dielectric substrate so as to oppose a top surface of the dielectric substrate and includes an aperture” and “a via-hole electrode that penetrates through the aperture in the thickness direction of the dielectric substrate so as not to be electrically connected to the resonator electrode and that is electrically connected to the first and second ground electrodes,” Applicants have been able to provide a bandpass filter that prevents undesired spurious signals caused by the resonances of the ground electrode to achieve good transmission characteristics (see, for example, the third full paragraph on page 2 of the originally filed specification).

The Examiner acknowledged that Mizoguchi et al. (JP '002 and JP '111) fail to teach or suggest a via-hole electrode disposed in the aperture of a resonator electrode and connected to the first and second ground electrodes. However, the Examiner alleged that Chaturvedi, Fig. 2, “discloses a ceramic package having a spiral transmission line and a via-hole electrode 202 located at the center of the ceramic package to connected the upper and lower ground electrodes 212, 214.” Thus, the Examiner concluded that it would have been obvious “to provide a via-hole electrode at the aperture of the resonator electrodes and connected to the first and second ground electrodes in the devices of Mizoguchi et al. to reduce the size of the filter/package without interrupting the properties of the transmission line/resonator electrode as taught by Chaturvedi.” Applicants respectfully disagree.

As clearly seen in Fig. 2 of Chaturvedi, although the via hole 202 is disposed in a central region of the device, Chaturvedi fails to teach or suggest a resonator electrode having an aperture therein. Thus, Chaturvedi clearly fails to teach or suggest “a via-hole electrode that penetrates through the aperture [in the resonator electrode] in the thickness direction of the dielectric substrate so as not to be electrically connected to

the resonator electrode and that is electrically connected to the first and second ground electrodes” as recited in Applicants’ claim 1.

In contrast, Chaturvedi teaches a spiral transmission line that includes portions of the spiral transmission line that are disposed on a plurality of dielectric layers 206. None of the portions of the spiral transmission line 206 of Chaturvedi includes any apertures therein. Thus, Chaturvedi fails to teach or suggest any electrode (transmission line or resonator) having an aperture therein.

The Examiner alleged that Chaturvedi also teaches that the transmission line can be a resonator in col. 8, lines 42-56. However, even if the transmission line of Chaturvedi was a resonator, the resonator would be a spiral resonator having portions of the spiral resonator disposed on a plurality of dielectric layers 206, and would not include any portion having an aperture therein. Chaturvedi neither teaches nor suggests that the via hole conductor 202 could or should be used in a device having a resonator electrode with an aperture therein, and certainly fails to teach or suggest that the via hole conductor 202 could or should be arranged to penetrate through such an aperture. Thus, although Chaturvedi teaches that the transmission line can be a resonator, Chaturvedi fails to teach or suggest any resonator electrode which includes an aperture therein, or any via-hole electrode which is arranged to penetrate through the aperture.

Since none of Mizoguchi et al. (JP ‘002 and JP ‘111) and Chaturvedi teaches or suggest any via-hole electrode that penetrates through an aperture in a resonator electrode, Applicants respectfully submit that Mizoguchi et al. (JP ‘002 and JP ‘111) and Chaturvedi clearly fail to teach or suggest the feature of “a via-hole electrode that penetrates through the aperture in the thickness direction of the dielectric substrate so as not to be electrically connected to the resonator electrode and that is electrically connected to the first and second ground electrodes” as recited in Applicants’ claim 1.

In addition, if, as suggested by the Examiner, the via-hole electrode of Chaturvedi were provided in the aperture 9a or 23a of either of the bandpass filters of

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Mizoguchi (JP '002 and JP '111), the resulting structure would not operate properly. Particularly, if the via hole electrode 202 of Chaturvedi were provided in the apertures 9a and 23a of the band pass filters of Mizoguchi (JP '002 and JP '111), due to the shape of the apertures 9a and 23a (a long, narrow rectangular shape) of Mizoguchi (JP '002 and JP '111), the via hole electrode would either be in contact with the resonator electrodes 9 and 23 at the edges of the apertures 9a and 23a, or at least be disposed in very close proximity to the resonator electrodes 9 and 23 along the upper and lower edges of the apertures 9a and 23a, which would drastically change the resonant modes of the bandpass filters. In other words, due to the operating characteristics of bandpass filters which utilize resonant electrode and the interdependency of the shape of the resonant electrode and aperture therein and the resonant modes of the bandpass filter, it would not have been obvious to merely provide the via-hole electrode of Chaturvedi in the apertures 9a and 23a of the resonator electrodes 9 and 23 of Mizoguchi et al. (JP '002 and JP '111), as alleged by the Examiner.

Since none of Mizoguchi (JP '002 and JP '111) and Chaturvedi teaches or suggests anything at all about changing the shape and configuration of the resonator electrode so as to accommodate a via-hole electrode in an aperture thereof, Applicants respectfully submit that it would not have been obvious to merely provide the via-hole electrode of Chaturvedi in the apertures in the resonator electrodes of Mizoguchi (JP '002 and JP '111), as alleged by the Examiner.

The Examiner is reminded that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 1276, 1278 (Fed. Cir. 1987).

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Mizoguchi et al. (JP 2002-325002 or JP 2002-335111) in view of Chaturvedi (U.S. 5,977,850).

The Examiner relied upon Kanba to allegedly cure deficiencies of Mizoguchi et

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al. (JP '002 and JP '111) and Chaturvedi. However, Kanba clearly fails to teach or suggest the feature of "a via-hole electrode that penetrates through the aperture in the thickness direction of the dielectric substrate so as not to be electrically connected to the resonator electrode and that is electrically connected to the first and second ground electrodes" as recited in Applicants' claim 1. Thus, Applicants respectfully submit that Kanba fails to cure the deficiencies of Mizoguchi et al. (JP '002 and JP '111) and Chaturvedi described above.

Accordingly, Applicants respectfully submit that Mizoguchi et al. (JP '002 and JP '111), Chaturvedi and Kanba, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in Applicants' claim 1.

In view of the foregoing amendments and remarks, Applicants respectfully submit that claim 1 is allowable. Claims 2-11 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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